

Serial Number:

09/5/9013B

CRF Processing Date: 10/02/01

Edited by: mls

Verified by: #13

☐

Changed a file from non-ASCII to ASCII

☐

Changed the margins in cases where the sequence text was "wrapped" down to the next line.

☐

Edited a format error in the Current Application Data section, specifically:

☐Edited the Current Application Data section with the actual current number. The number input by applicant was ☐ the prior application data; or ☐ other☐

Added the mandatory heading and subheadings for "Current Application Data".

☐

Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an

☐

Changed the spelling of a mandatory field (the headings or subheadings), specifically:

☐

Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were

☐

Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

☐

Corrected subheading placement. All responses must be on the same line as each subheading. If applicant placed a response below the subheading, this was moved to its appropriate place.

☐

Inserted colons after headings/subheadings. Headings edited included:

☐

Deleted extra, invalid, headings used by an applicant, specifically:

☐Deleted: ☐ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at ☐ page numbers throughout text; ☐ other invalid text, such as☐

Inserted mandatory headings, specifically:

☐

Corrected an obvious error in the response, specifically:

☐

Edited identifiers where upper case is used but lower case is required, or vice versa

☐

Corrected an error in the Number of Sequences field, specifically:

☐

A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.

☐Deleted *ending* stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly due to a PatentIn bug). Sequences corrected:☒

Other:

Edited sequence number 5 and sequence

number 9 - Specifically field identifiers

were not aligned with the left margins

\*Examiner: The above corrections must be communicated to the applicant in the first O Action. DO NOT send a copy of this form.

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#13

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/5<sup>5</sup>9,013B

DATE: 11/02/2001  
 TIME: 09:41:55

Input Set : A:\pto.mh.txt  
 Output Set: N:\CRF3\11022001\I599013B.raw

3 <110> APPLICANT: Ono, Toshiro  
 4 Nakayama, Eiichi  
 6 <120> TITLE OF INVENTION: CANCER ASSOCIATED ANTIGENS AND USES  
 7 THEREFOR  
 9 <130> FILE REFERENCE: L0461/7086  
 C--> 11 <140> CURRENT APPLICATION NUMBER: US/09/5<sup>5</sup>9,013B  
 12 <141> CURRENT FILING DATE: 2000-04-26  
 14 <150> PRIOR APPLICATION NUMBER: US 60/168,353  
 15 <151> PRIOR FILING DATE: 1999-12-01  
 17 <160> NUMBER OF SEQ ID NOS: 32  
 19 <170> SOFTWARE: FastSEQ for Windows Version 3.0  
 21 <210> SEQ ID NO: 1  
 22 <211> LENGTH: 538  
 23 <212> TYPE: DNA  
 24 <213> ORGANISM: Mus musculus  
 26 <400> SEQUENCE: 1  
 27 agatcaagg gaaaaggaga accccatgcg ggaactgcgc atccgcaagc tctgcctcaa  
 28 tatctgcgtc ggggagagcg gagacagact gaccgcggca gccaaaggtgt tggagcagct 120  
 29 cacaggccag accccggtgt tctccaaagc tagatacact gtcaggctcct ttggcatccg 180  
 30 gagaaatgag aagattgctg ttcactgcac agtccgcgga gccaaaggcag aggaaattct 240  
 31 ggagaaaaggc ctgaaggtgc gggagtatga gttgcggaaa aataacttct cggatactgg 300  
 32 aaacttttgt tttggaattc aagaacacat tgacctgggc atcaaatacg acccaagcat 360  
 33 tgggatctac ggcctggact tctatgtggt gctgggtagg ccagggttca gcatcgaga 420  
 34 caagaagcgc agaacaggct gcattggggc caaacacaga atcagcaagg aggaggccat 480  
 35 gcgctggttc cagcagaagt acgatggaat catccttctt ggaaaataaa cttgatcc 538  
 37 <210> SEQ ID NO: 2  
 38 <211> LENGTH: 175  
 39 <212> TYPE: PRT  
 40 <213> ORGANISM: Mus musculus  
 42 <400> SEQUENCE: 2  
 43 Asp Gln Gly Glu Lys Glu Asn Pro Met Arg Glu Leu Arg Ile Arg Lys  
 44 1 5 10 15  
 45 Leu Cys Leu Asn Ile Cys Val Gly Glu Ser Gly Asp Arg Leu Thr Arg  
 46 20 25 30  
 47 Ala Ala Lys Val Leu Glu Gln Leu Thr Gly Gln Thr Pro Val Phe Ser  
 48 35 40 45  
 49 Lys Ala Arg Tyr Thr Val Arg Ser Phe Gly Ile Arg Arg Asn Glu Lys  
 50 50 55 60  
 51 Ile Ala Val His Cys Thr Val Arg Gly Ala Lys Ala Glu Glu Ile Leu  
 52 65 70 75 80  
 53 Glu Lys Gly Leu Lys Val Arg Glu Tyr Glu Leu Arg Lys Asn Asn Phe  
 54 85 90 95  
 55 Ser Asp Thr Gly Asn Phe Gly Phe Gly Ile Gln Glu His Ile Asp Leu  
 56 100 105 110  
 57 Gly Ile Lys Tyr Asp Pro Ser Ile Gly Ile Tyr Gly Leu Asp Phe Tyr  
 58 115 120 125  
 59 Val Val Leu Gly Arg Pro Gly Phe Ser Ile Ala Asp Lys Lys Arg Arg

Non Error

1642

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ENTERED

ENTERED

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## RAW SEQUENCE LISTING

DATE: 11/02/2001

PATENT APPLICATION: US/09/599,013B

TIME: 09:41:55

Input Set : A:\pto.mh.txt

Output Set: N:\CRF3\11022001\I599013B.raw

```

60      130      135      140
61 Thr Gly Cys Ile Gly Ala Lys His Arg Ile Ser Lys Glu Glu Ala Met
62 145      150      155      160
63 Arg Trp Phe Gln Gln Lys Tyr Asp Gly Ile Ile Leu Pro Gly Lys
64      165      170      175
66 <210> SEQ ID NO: 3
67 <211> LENGTH: 1228
68 <212> TYPE: DNA
69 <213> ORGANISM: Mus musculus
71 <400> SEQUENCE: 3
72 acagccgcat cttcttgtgc agtgccagcc tcgtcccgta gacaaaatgg tgaaggctcg 60
73 tgtgaacgga tttggccgta ttgggcgcct ggtaaccagg gctgccattt gcagtggcaa 120
74 agtggagatt gttgccatca acgacccctt cattgacctc aactacatgg tctacatgtt 180
75 ccagtatgac tccactcacg gcaaattcaa cggcacagtc aaggccgaga atgggaagct 240
76 tgtcatcaac gggaagccca tcaccatctt ccaggagcga gacccacta acatcaaaty 300
77 gggtagggcc ggtgctgagt atgtcgtgga gtctactggt gtcttcacca ccatggagaa 360
78 ggccggggcc cacttgaagg gtggagccaa acgggtcatc atctccgccc cttctgcoga 420
79 tgcccccatg tttgtgatgg gtgtgaacca cgagaaatat gacaactcac tcaagattgt 480
80 cagcaatgca tcctgcacca ccaactgctt agccccctg gccaaagtca tccatgacaa 540
81 ctttggcatt gtggaagggc tcatgaccac agtccatgcc atcactgcca ccagaagac 600
82 tgtggatggc ccctctggaa agctgtggcg tgatggccgt ggggctgccc agaacatcat 660
83 ccctgcatcc actgggtgctg ccaaggctgt gggcaaggtc atcccagagc tgaacgggaa 720
84 gctcactggc atggccttcc gtgttcttac ccccaatgtg tccgtcgtgg atctgacgtg 780
85 ccgcctggag aaacctgcca agtatgatga catcaagaag gtggtgaagc aggcatttga 840
86 gggcccactg aagggcattc tgggctacac tgaggaccag gttgtctctc gcgacttcaa 900
87 cagcaactcc cactcttcca ccttcgatgc cggggctggc attgctctca atgacaactt 960
88 tgtcaagctc atttctcgtt atgacaatga atacggctac agcaacaggg tgggtggacct 1020
89 catggcctac atggcctcca aggagtaaga aacctggac caccacccc agcaaggaca 1080
90 ctgagcaaga gaggccctat cccaactcgg cccccaacac tgagcatctc cctcacaatt 1140
91 tccatcccag acccccataa taacaggagg ggcctaggga gccctcccta ctctcttgaa 1200
92 taccatcaat aaagtctgct gcacccac 1228
94 <210> SEQ ID NO: 4
95 <211> LENGTH: 333
96 <212> TYPE: PRT
97 <213> ORGANISM: Mus musculus
99 <400> SEQUENCE: 4
100 Met Val Lys Val Gly Val Asn Gly Phe Gly Arg Ile Gly Arg Leu Val
101 1      5      10      15
102 Thr Arg Ala Ala Ile Cys Ser Gly Lys Val Glu Ile Val Ala Ile Asn
103      20      25      30
104 Asp Pro Phe Ile Asp Leu Asn Tyr Met Val Tyr Met Phe Gln Tyr Asp
105      35      40      45
106 Ser Thr His Gly Lys Phe Asn Gly Thr Val Lys Ala Glu Asn Gly Lys
107      50      55      60
108 Leu Val Ile Asn Gly Lys Pro Ile Thr Ile Phe Gln Glu Arg Asp Pro
109      65      70      75      80
110 Thr Asn Ile Lys Trp Gly Glu Ala Gly Ala Glu Tyr Val Val Glu Ser
111      85      90      95
112 Thr Gly Val Phe Thr Thr Met Glu Lys Ala Gly Ala His Leu Lys Gly

```

# RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/5<sup>S</sup>9,013B

DATE: 11/02/2001

TIME: 09:41:55

Input Set : A:\pto.mh.txt

Output Set: N:\CRF3\11022001\I599013B.raw

```

113          100          105          110
114 Gly Ala Lys Arg Val Ile Ile Ser Ala Pro Ser Ala Asp Ala Pro Met
115          115          120          125
116 Phe Val Met Gly Val Asn His Glu Lys Tyr Asp Asn Ser Leu Lys Ile
117          130          135          140
118 Val Ser Asn Ala Ser Cys Thr Thr Asn Cys Leu Ala Pro Leu Ala Lys
119 145          150          155          160
120 Val Ile His Asp Asn Phe Gly Ile Val Glu Gly Leu Met Thr Thr Val
121          165          170          175
122 His Ala Ile Thr Ala Thr Gln Lys Thr Val Asp Gly Pro Ser Gly Lys
123          180          185          190
124 Leu Trp Arg Asp Gly Arg Gly Ala Ala Gln Asn Ile Ile Pro Ala Ser
125          195          200          205
126 Thr Gly Ala Ala Lys Ala Val Gly Lys Val Ile Pro Glu Leu Asn Gly
127 210          215          220
128 Lys Leu Thr Gly Met Ala Phe Arg Val Pro Thr Pro Asn Val Ser Val
129 225          230          235          240
130 Val Asp Leu Thr Cys Arg Leu Glu Lys Pro Ala Lys Tyr Asp Asp Ile
131          245          250          255
132 Lys Lys Val Val Lys Gln Ala Ser Glu Gly Pro Leu Lys Gly Ile Leu
133          260          265          270
134 Gly Tyr Thr Glu Asp Gln Val Val Ser Cys Asp Phe Asn Ser Asn Ser
135          275          280          285
136 His Ser Ser Thr Phe Asp Ala Gly Ala Gly Ile Ala Leu Asn Asp Asn
137 290          295          300
138 Phe Val Lys Leu Ile Ser Trp Tyr Asp Asn Glu Tyr Gly Tyr Ser Asn
139 305          310          315          320
140 Arg Val Val Asp Leu Met Ala Tyr Met Ala Ser Lys Glu
141          325          330
143 <210> SEQ ID NO: 5
144 <211> LENGTH: 1705
145 <212> TYPE: DNA
146 <213> ORGANISM: Mus musculus
W--> 147 <220> FEATURE:
148 <221> NAME/KEY: Unsure
149 <222> LOCATION: (611)..(611)
150 <223> OTHER INFORMATION: n = a, c, g, or t
W--> 151 <220> FEATURE:
152 <221> NAME/KEY: Unsure
153 <222> LOCATION: (730)..(730)
154 <223> OTHER INFORMATION: n = a, c, g, or t
W--> 155 <220> FEATURE:
156 <221> NAME/KEY: Unsure
157 <222> LOCATION: (746)..(746)
158 <223> OTHER INFORMATION: n = a, c, g, or t
W--> 160 <220> FEATURE:
161 <221> NAME/KEY: Unsure
162 <222> LOCATION: (755)..(755)
163 <223> OTHER INFORMATION: n = a, c, g, or t

```

## RAW SEQUENCE LISTING

DATE: 11/02/2001

PATENT APPLICATION: US/09/599,013B

TIME: 09:41:55

Input Set : A:\pto.mh.txt

Output Set: N:\CRF3\11022001\I599013B.raw

```

W--> 164 <220> FEATURE:
      165 <221> NAME/KEY: Unsure
      166 <222> LOCATION: (1288)..(1288)
      167 <223> OTHER INFORMATION: n = a, c, g, or t
W--> 168 <220> FEATURE:
      169 <221> NAME/KEY: Unsure
      170 <222> LOCATION: (1318)..(1318)
      171 <223> OTHER INFORMATION: n = a, c, g, or t
W--> 172 <220> FEATURE:
      173 <221> NAME/KEY: Unsure
      174 <222> LOCATION: (1360)..(1360)
      175 <223> OTHER INFORMATION: n = a, c, g, or t
      177 <400> SEQUENCE: 5
      178 gccgcggtga gggaaagtga cgcgatggcc ggggtccgcgt ggggtgtccaa ggtctctcgg      60
      179 ctgctgggtg cattccacaa cacaaaacag gtgacaagag gttttgctgg tgggtgttcag      120
      180 acagtaactt taattcctgg agatgggaatt ggcccagaaa tttcagcctc agtcatgaag      180
      181 atttttgatg ctgccaaaag acctattcag tgggaggagc gcaatgtcac agcaattcaa      240
      182 ggaccaggag gaaagtggat gatccctcca gaagccaagg agtccatgga taagaacaag      300
      183 atgggcttga aaggcccaact aaagacccca atagccgctg gccatccatc tatgaatctg      360
      184 ttgcttcgta agacatttga cctttatgcc aatgtccggc catgtgtctc aattgaagg      420
      185 tataaaaccc cttacacgga tgtaaataatc gtcaccatcc gagagaacac ggaaggagaa      480
      186 tacagtggaa ttgagcatgt gatcgttgat ggggttgtgc agagcatcaa gctcatcacc      540
      187 gaagaagcaa gcaagcgcgt tgcagagttt gcttcgagta cgctcgggaa aaccaccgga      600
W--> 188 accacgtcac ngctgtgcac aaaagctaac atcatgagga tgtcagatgg gctctttctg      660
      189 caaaaatgca gggaaaattt cggaagaact gtaaagactt aaatttaacg agatgtactt      720
W--> 190 ggatactgtn gtttaaatat gggtaanaag acccntccaa tttgatgttc ttgtcatgcc      780
      191 aaatttatac ggagacatcc ttagtgatct gtgtgcagga ctgattggag gtcttgggg      840
      192 gactccaagt ggcaatattg gagccaacgg tgttgccatc tttgaatcgg ttcatggaac      900
      193 agccccggac attgcaggca aggacatggc caaccccaag gccctcctgc ttagtgctgt      960
      194 gatgatgctt cgccacatgg gactttttga ccatgcagca aaaatcgagg ctgcatgttt      1020
      195 tgctacaatt aaggatggaa agagcttaac aaaagatctg ggaggcaacg cgaagtgtc      1080
      196 tgacttcaca gaagaaatct gtgcgtagag caaagactta gattagcact cctgctgggt      1140
      197 gatttgctgc agtcagtcaa tcaactccaa aggataccct gtaatcctcc ttgagggcgc      1200
      198 ccaccattgg tttgcttgg tcttgacaga gtacgttttt tgaatctggc cttttcttaa      1260
W--> 199 caaaaccctt tgcaatggat gcacatgntg gccccaggcc tttcattcaa aaggtttncc      1320
W--> 200 ccaagtgtct gtggtattta ttgtcccgtc tgggtaaacn ttattttgta aactgtaagt      1380
      201 gaactgtatc atttatcatt gttaacccat tttacacttc aggcaaaatc attttcctca      1440
      202 actgtaaata ttctgatata gaattaataa gagaagatat ttaacttttt aacaaaagcc      1500
      203 ctgggattttt ggtttatgaa aaacaaactg ggaataaaaac aggggttttaa caatcgca      1560
      204 agataacatt attctaatac taatgggtac aaaagaaatt tactgggaaa gttcacagca      1620
      205 aaaaaatgg atattttctta aaaatatgga aataaagtat ttgtcctata catgaattac      1680
      206 tattaataaaa aatgtaagct ccaag      1705
      208 <210> SEQ ID NO: 6
      209 <211> LENGTH: 233
      210 <212> TYPE: PRT
      211 <213> ORGANISM: Mus musculus
      213 <220> FEATURE:
      214 <221> NAME/KEY: UNSURE
      215 <222> LOCATION: (204)..(204)

```

## RAW SEQUENCE LISTING

DATE: 11/02/2001

PATENT APPLICATION: US/09/599,013B

TIME: 09:41:55

Input Set : A:\pto.mh.txt

Output Set: N:\CRF3\11022001\I599013B.raw

```

216 <223> OTHER INFORMATION: Xaa = any amino acid
W--> 217 <400> SEQUENCE: 6
218 Ala Ala Val Arg Glu Val Asp Ala Met Ala Gly Ser Ala Trp Val Ser
219 1 5 10 15
220 Lys Val Ser Arg Leu Leu Gly Ala Phe His Asn Thr Lys Gln Val Thr
221 20 25 30
222 Arg Gly Phe Ala Gly Gly Val Gln Thr Val Thr Leu Ile Pro Gly Asp
223 35 40 45
224 Gly Ile Gly Pro Glu Ile Ser Ala Ser Val Met Lys Ile Phe Asp Ala
225 50 55 60
226 Ala Lys Ala Pro Ile Gln Trp Glu Glu Arg Asn Val Thr Ala Ile Gln
227 65 70 75 80
228 Gly Pro Gly Gly Lys Trp Met Ile Pro Pro Glu Ala Lys Glu Ser Met
229 85 90 95
230 Asp Lys Asn Lys Met Gly Leu Lys Gly Pro Leu Lys Thr Pro Ile Ala
231 100 105 110
232 Ala Gly His Pro Ser Met Asn Leu Leu Leu Arg Lys Thr Phe Asp Leu
233 115 120 125
234 Tyr Ala Asn Val Arg Pro Cys Val Ser Ile Glu Gly Tyr Lys Thr Pro
235 130 135 140
236 Tyr Thr Asp Val Asn Ile Val Thr Ile Arg Glu Asn Thr Glu Gly Glu
237 145 150 155 160
238 Tyr Ser Gly Ile Glu His Val Ile Val Asp Gly Val Val Gln Ser Ile
239 165 170 175
240 Lys Leu Ile Thr Glu Glu Ala Ser Lys Arg Ile Ala Glu Phe Ala Ser
241 180 185 190
W--> 242 Ser Thr Leu Gly Thr Thr Thr Gly Thr Thr Ser Xaa Leu Cys Thr Lys
243 195 200 205
244 Ala Asn Ile Met Arg Met Ser Asp Gly Leu Phe Leu Gln Lys Cys Arg
245 210 215 220
246 Glu Ile Cys Gly Arg Thr Val Lys Thr
247 225 230
249 <210> SEQ ID NO: 7
250 <211> LENGTH: 853
251 <212> TYPE: DNA
252 <213> ORGANISM: Mus musculus
254 <400> SEQUENCE: 7
255 gccatgtttg gagagagaag agccaaacag ccatctccct gcacagtcct tcaagctcac 60
256 ctctgcctt ccgtggacaa gaggaagcac aaagaatcat ccaggatatg aagctgaggg 120
257 ttccagccgc aaggtcacca ggctactccg cctgggagtc aaggaagact cggaagaaca 180
258 gcatgatgtg aaagcagagg ctttcttcca ggctggagag gggagagatg agcaagggtg 240
259 acagggccag cctggagtgg gagcgggtgg aacagaaggg gaaggagaag aattaaatgg 300
260 aggaaaaggg cacttttggtc ctggtgctcc tggctctatg ggtgatgggg acaaggatag 360
261 tggcaccagg gctggtggtg tggagcagga acaaaatgag ccagttgctg agggcactga 420
262 gagccaggag aatggaaatc ctgggggtag gcagatgccc ctccagggct ctaggttcgc 480
263 ccagcatcga ctgagggaa cttgagtcct tttgcagcgc actaatcct ttgatgtccc 540
264 aagggaggat cttgatagac tgatggatgc ctgtgtgtcc agagtgcaga attggtttaa 600
265 gatcaggagg gctgcggcaa gaagaaccag gaggagggca acaccagtcc ctgaacattt 660
266 tagaggaaca ttcgagtgtc ctgcttgtcg tggagtgaga tggggagaaa gatgcccttt 720

```

## VERIFICATION SUMMARY

DATE: 11/02/2001

PATENT APPLICATION: US/09/599,013B

TIME: 09:41:56

Input Set : A:\pto.mh.txt

Output Set: N:\CRF3\11022001\I599013B.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:147 M:283 W: Missing Blank Line separator, <220> field identifier  
L:151 M:283 W: Missing Blank Line separator, <220> field identifier  
L:155 M:283 W: Missing Blank Line separator, <220> field identifier  
L:164 M:283 W: Missing Blank Line separator, <220> field identifier  
L:168 M:283 W: Missing Blank Line separator, <220> field identifier  
L:172 M:283 W: Missing Blank Line separator, <220> field identifier  
L:188 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:190 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:199 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:200 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5  
L:217 M:283 W: Missing Blank Line separator, <400> field identifier  
L:242 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6  
L:310 M:283 W: Missing Blank Line separator, <220> field identifier  
L:314 M:283 W: Missing Blank Line separator, <220> field identifier  
L:318 M:283 W: Missing Blank Line separator, <220> field identifier  
L:327 M:283 W: Missing Blank Line separator, <220> field identifier  
L:331 M:283 W: Missing Blank Line separator, <220> field identifier  
L:335 M:283 W: Missing Blank Line separator, <220> field identifier  
L:339 M:283 W: Missing Blank Line separator, <220> field identifier  
L:343 M:283 W: Missing Blank Line separator, <220> field identifier  
L:347 M:283 W: Missing Blank Line separator, <220> field identifier  
L:356 M:283 W: Missing Blank Line separator, <220> field identifier  
L:360 M:283 W: Missing Blank Line separator, <220> field identifier  
L:364 M:283 W: Missing Blank Line separator, <220> field identifier  
L:368 M:283 W: Missing Blank Line separator, <220> field identifier  
L:372 M:283 W: Missing Blank Line separator, <220> field identifier  
L:376 M:283 W: Missing Blank Line separator, <220> field identifier  
L:385 M:283 W: Missing Blank Line separator, <220> field identifier  
L:389 M:283 W: Missing Blank Line separator, <220> field identifier  
L:393 M:283 W: Missing Blank Line separator, <220> field identifier  
L:397 M:283 W: Missing Blank Line separator, <220> field identifier  
L:401 M:283 W: Missing Blank Line separator, <220> field identifier  
L:405 M:283 W: Missing Blank Line separator, <220> field identifier  
L:414 M:283 W: Missing Blank Line separator, <220> field identifier  
L:418 M:283 W: Missing Blank Line separator, <220> field identifier  
L:422 M:283 W: Missing Blank Line separator, <220> field identifier  
L:426 M:283 W: Missing Blank Line separator, <220> field identifier  
L:430 M:283 W: Missing Blank Line separator, <220> field identifier  
L:434 M:283 W: Missing Blank Line separator, <220> field identifier  
L:443 M:283 W: Missing Blank Line separator, <220> field identifier  
L:447 M:283 W: Missing Blank Line separator, <220> field identifier  
L:462 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:463 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:464 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:465 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:466 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:467 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/599,013B

DATE: 11/02/2001

TIME: 09:41:56

Input Set : A:\pto.mh.txt

Output Set: N:\CRF3\11022001\I599013B.raw

L:658 M:283 W: Missing Blank Line separator, <220> field identifier

L:662 M:283 W: Missing Blank Line separator, <400> field identifier

L:664 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15



## VERIFICATION SUMMARY

DATE: 11/02/2001

PATENT APPLICATION: US/09/599,013B

TIME: 09:13:08

Input Set : A:\pto.mh.txt

Output Set: N:\CRF3\11022001\I599013B.raw

L:332 M:283 W: Missing Blank Line separator, <220> field identifier  
L:332 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:333 M:283 W: Missing Blank Line separator, <220> field identifier  
L:333 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:334 M:283 W: Missing Blank Line separator, <220> field identifier  
L:334 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:335 M:283 W: Missing Blank Line separator, <220> field identifier  
L:335 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:336 M:283 W: Missing Blank Line separator, <220> field identifier  
L:336 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:338 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:339 M:283 W: Missing Blank Line separator, <220> field identifier  
L:339 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:340 M:283 W: Missing Blank Line separator, <220> field identifier  
L:340 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:341 M:283 W: Missing Blank Line separator, <220> field identifier  
L:341 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:342 M:283 W: Missing Blank Line separator, <220> field identifier  
L:342 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:343 M:283 W: Missing Blank Line separator, <220> field identifier  
L:343 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:344 M:283 W: Missing Blank Line separator, <220> field identifier  
L:344 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:346 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:347 M:283 W: Missing Blank Line separator, <220> field identifier  
L:347 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:348 M:283 W: Missing Blank Line separator, <220> field identifier  
L:348 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:360 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:9  
L:360 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:9  
L:360 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:9  
L:360 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:361 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:9  
L:361 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:9  
L:361 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:9  
L:361 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:362 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:9  
L:362 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:9  
L:362 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:9  
L:362 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:363 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:9  
L:363 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:9  
L:363 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:9  
L:363 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:364 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:9  
L:364 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:9  
L:364 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:9  
L:364 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:365 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:9

## VERIFICATION SUMMARY

DATE: 11/02/2001

PATENT APPLICATION: US/09/599,013B

TIME: 09:13:08

Input Set : A:\pto.mh.txt

Output Set: N:\CRF3\11022001\I599013B.raw

L:365 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:9  
L:365 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:9  
L:365 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9  
L:556 M:283 W: Missing Blank Line separator, <220> field identifier  
L:556 M:256 W: Invalid Numeric Header Field, <220> has non-blank data  
L:557 M:283 W: Missing Blank Line separator, <400> field identifier  
L:559 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:15  
L:559 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:15  
L:559 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:15  
L:559 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15

**STATISTICS SUMMARY**

PATENT APPLICATION: US/09/599,013B

DATE: 11/02/2001

TIME: 09:13:08

Input Set : A:\pto.mh.txt

Output Set: N:\CRF3\11022001\I599013B.raw

Application Serial Number: US/09/599,013B

Alpha or Numeric: Numeric

Application Class:

Application File Date: 04-26-2000

Art Unit: 1642

Software Application: FastSeq

Total Number of Sequences: 32

Total Nucleotides: 11930

Total Amino Acids: 2684

Number of Errors: 0

Number of Warnings: 106

Number of Corrections: 1

**MESSAGE SUMMARY**

256 W: 35 (Invalid Numeric Header Field)

258 W: 21 (Mandatory Feature missing)

270 C: 1 (Current Application Number differs)

283 W: 38 (Missing Blank Line separator)

341 W: 12 ((46) "n" or "Xaa" used)